

Additional Water Supply Performance Measures

- **Lake Okeechobee Minimum Flows and Levels**
- **Temporary forward pump operations and unmet needs**
- **Level of certainty for Lake users**
- **Lake stage impacts to direct users of the Lake**

Lake Okeechobee MFL PM

- Exceedence = stages below 11 ft for more than 80 days
- Violation = more than one exceedence within six years

Results of the Lake MFL PM:Base Condition

- Number of MFL exceedences: 3
- Ave. days per exceedence: 120
- Number of MFL violations: 1
- Number of days < 11 ft: 524
- Number of years Lake is < 11ft: 7

Results of the Lake MFL PM: TSP

- Number of MFL exceedences: 7
- Ave. days per exceedence: 173
- Number of MFL violations: 5 (1 @ 420 days)
- Number of days < 11 ft: 1471
- Number of years Lake is < 11ft: 15

Temporary forward pumps PM

- Number of excursions when lake reaches 10.2 ft or less
- Average duration of each excursion
- Average amount of cutbacks (pump capacity or water shortage based)
- Average unmet needs for LOSA
- Average deliveries to the LEC urban areas from the Lake

Results Forward Pumps: Base Condition

- Number excursions < 10.2 ft: 3
- Ave. days per excursion: 70
- Range of cutbacks: 35%-55%
- Ave. unmet LOSA needs: 40,400 ac ft
- Ave. LEC urban deliveries: 13,375 ac ft

Results Forward Pumps:TSP

- Number excursions < 10.2 ft: 8
- Ave. days per excursion: 124
- Range of cutbacks: 0%-55%
- Ave. unmet LOSA needs: 94,050 ac ft
- Ave. LEC urban deliveries: 17,840 ac ft

Level of Certainty PM

- Number of water shortage events in the 36 year simulation period
- Number of forward pump events in the 36 year simulation period

Level of Certainty PM

Results: Base Condition

- **Number of water shortages:** 7
- **Level of certainty:** 1 in 5
- **Number forward pump events:** 3
- **Level of certainty forward pumps:** 1 in 12

Level of Certainty PM

Results: TSP

- Number of water shortages: 7
- Level of certainty: 1 in 5
- Number forward pump events: 8
- Level of certainty forward pumps: 1 in 4.5

Lake Stage Impacts to Direct Users of the Lake

- Determine calculated lowest stage of lake
- Compare this elevation to intake limits of existing public water supply utilities, commercial/industrial and agricultural uses which directly withdraw water from the lake or rim canal

Summary

- Lowering of SSM reduces the amount and duration of unmet needs over the simulation period
- Lowering SSM increases number and magnitude of low lake events and increases reliance on forward pumps for water supply
- Potential for Lake MFL violations increases under the TSP
- Further analysis on forward pump size and unmet needs is needed
- Projects to be completed in the next five years will provide added storage and flexibility for meeting water supply needs

Lake Stage Impacts to Direct Users of the Lake: Results

- Lowest Lake Stage Base Condition: 9.61 ft
- Lowest Lake stage TSP: 8.82 ft
- Public water supply utilities contacted
 - Pump intakes sufficient
 - Concerns regarding shoaling
 - Alternative sources online in 2008
- Commercial/Industrial and Ag contacted
 - Some pump intakes not low enough
 - Contingency plans needed
 - Additional research needed